



# FROM STEM EDUCATION TO DEEP SEA DISCOVERY: SAMSAT EDUCATOR GISELLE DE LEON TRANSMITS LIVE FROM THE E/V NAUTILUS

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BY TRACY IDELL HAMILTON

**SAN ANTONIO, TX** – As the Lead STEM Educator at the San Antonio Museum of Science and Technology (SAMSAT), Giselle De Leon wears many hats—event coordinator, curriculum developer, public speaker, artist, and educator for K–12 students.

This summer, she’s adding a new title to her resume: deep-sea explorer.

Giselle is currently aboard the Exploration Vessel (E/V) Nautilus as a 2025 Science Communication Fellow with the Ocean Exploration Trust, participating in NA174, a hybrid expedition exploring the deep waters surrounding the Republic of the Marshall Islands and the Solomon Islands.

While at sea through Aug. 17, Giselle and her crewmates will connect with learners across the globe via Nautiluslive.org. The web portal includes a dashboard showing the ship’s position, multiple camera angles of the deck and below the ocean surface. Giselle and colleagues share insights from the expedition and highlight the importance of ocean exploration for our planet’s future. Viewers can submit questions in real time.



Giselle De Leon is a Science Communications Fellow aboard the E/V Nautilus, supporting the current mission's many outreach and educational endeavors. Image credit: Ocean Exploration Trust.



Giselle De Leon and Dani Hinshaw, pilot of the remotely operated vehicle Hercules, answer questions from a live audience at AREA 21 on Aug. 8. Image credit: SAMSAT

On Aug. 8, Giselle beamed into AREA 21 for a live Q&A session, giving local community members the chance to ask questions about discoveries being made in real time.

"We're building a case" for why the ocean needs to be studied and protected, Giselle told KENS5 ahead of the event. But "we can't protect what we don't know. Discovery is the first step."

The NA174 mission is located in one of the most remote and least explored regions of the Pacific, most of which has never been mapped. The Marshall Islands, a nation of over 1,200

islands, is surrounded by more than two million square kilometers of ocean.

The deep sea of Aolepān Aorōkin Mājefl is home to over 300 unexplored seamounts, vast ridges, and historically significant World War II-era underwater cultural heritage sites. Over 21 days, the Nautilus team will use advanced mapping tools, remotely operated vehicles (ROVs), and telepresence technology to collect critical data that will support marine spatial planning, environmental protection, and regional security.

Giselle's passion for science began in her own backyard in San Antonio, inspired by nature shows and a curiosity for the world around her. "I was always in search of the next biological or geological wonder—it was often a jumping spider or a chunk of quartz," she recalls. That curiosity eventually led her to earn a Bachelor of Science in biology from the University of the Incarnate Word and pursue a career in science education and communication.



E/V Nautilus is owned and operated by the Ocean Exploration Trust, a non-profit established to explore the world's oceans to seek out new discoveries in the fields of geology, biology, maritime history, archaeology and chemistry. Image credit: Ocean Exploration Trust.

Since 2023, Giselle has been a member of the education team at SAMSAT, located on the Port San Antonio campus—just a few minutes from where Giselle grew up, in the Thompson neighborhood in Southeast San Antonio.

"With her background and knowledge of science, Giselle quickly became SAMSAT's Lead STEM Educator," said Dr. Cliff Zintgraff, SAMSAT's Chief Learning Officer. "It's hard to overstate the impact of someone from the neighborhood, who grew up in the aftermath of Kelly AFB's closure, leading from the front of our classrooms. And now all our students can see her as part of the E/V Nautilus crew. What a powerful example."

Working at SAMSAT "felt like a natural fit," Giselle said. As part of a small but mighty team, she's always on her toes. The reward? "Seeing our students have their magical aha moments, be that from learning with the engineering design process or figuring out a successful solution from our hands-on projects."

Her journey to the Nautilus began when she applied to the Ocean Exploration Trust's Science Communication Fellowship program after seeing the opportunity posted on their Instagram page. Now she's helping to translate complex scientific discoveries into engaging stories for the public. "I want students back home to see themselves in this work—to understand that they, too, can be scientists, explorers, and global citizens," she says.

Her work is deeply rooted in community. "The most fascinating thing I've witnessed is the power of community—especially how it transforms students," she says, pointing to SAMSAT's R20 Premier Esports program as one example of how STEM can build confidence and connection.

Giselle's story is also one of resilience. She credits her parents, Priscilla and Ricardo, for nurturing her curiosity and supporting her education. Though they both passed away due to COVID-19, their encouragement continues to guide her. "They were my biggest cheerleaders," she says. "I hold on tightly to the memory of their love."